

Amendments to the Claims

Claims 1-20 (Canceled)

Claim ~~21~~<sup>1</sup> (Original): A pixel page system, comprising:  
a video source providing pixel data for pixels in a frame, the frame having rows of pixels and columns of pixels;  
a video destination;  
a first memory having a plurality of memory locations;  
a second memory having a plurality of memory locations;  
a third memory having a plurality of memory locations;  
a fourth memory having a plurality of memory locations;  
a first address multiplexor connected to the first memory;  
a second address multiplexor connected to the second memory;  
a third address multiplexor connected to the third memory;  
a fourth address multiplexor connected to the fourth memory;  
a four-by-four switch connected to the first memory, the second memory, the third memory, and the fourth memory, having a first data input, a second data input, a first data output and a second data output, where the four-by-four switch switches with each frame between providing pixel data to the first memory and the second memory while receiving pixel data from the third memory and the fourth memory, and receiving pixel data from the first memory and the second memory while providing pixel data to the third memory and the fourth memory;  
a source address bus connected to the video source, the first address multiplexor, the second address multiplexor, the third address multiplexor, and the fourth address multiplexor;  
a first destination address bus connected to the video destination, the first address multiplexor, and the third address multiplexor;

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a second destination address bus connected to the video destination, the second address multiplexor, and the fourth address multiplexor;

a first data bus connected to the video source and the four-by-four switch;

a second data bus connected to the video destination and the four-by-four switch; and

where pixel data is stored in parallel to two memory devices and retrieved in parallel from two memory devices,

where each pixel corresponds to an entry in one of a plurality of pixel pages, and a pixel page includes multiple pixels from a row in the frame and multiple pixels from a column in the frame, and

where each entry in a pixel page corresponds to a memory location.

10 Claim ~~22~~<sup>2</sup> (Original): The pixel page system of claim ~~21~~<sup>1</sup>, where the video source generates addresses for storing pixel data and the video destination generates addresses for retrieving pixel data.

Claim ~~23~~<sup>3</sup> (Original): A method of storing and retrieving pixel data, comprising:

storing pixel data for a first frame of pixels in a first memory device and a second memory device, where each memory device includes a plurality of memory pages, and at least one memory page stores pixel data for at least two pixels from each of at least two horizontal rows of pixels in the first frame of pixels;


storing pixel data for a second frame of pixels in a third memory device and a fourth memory device, where each memory device includes a plurality of memory pages, and at least one memory page stores pixel data for at least two pixels from each of at least two horizontal rows of pixels in the second frame of pixels; and

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retrieving pixel data for the first frame of pixels from the first memory device and second memory device.

Claim <sup>4</sup>~~24~~ (Original): The method of claim <sup>3</sup>~~23~~, where pixel data for the second frame of pixels is stored and pixel data for the first frame of pixels is retrieved in parallel.

Claim <sup>5</sup>~~25~~ (Original): The method of claim <sup>3</sup>~~23~~, where pixel data is stored to the first memory device and the second memory device while pixel data is retrieved from the third memory device and the fourth memory device, and pixel data is retrieved from the first memory device and the second memory device while pixel data is stored to the third memory device and the fourth memory device.

 Claim <sup>6</sup>~~26~~ (Original): The method of claim <sup>3</sup>~~23~~, where the memory devices switch between storing and retrieving with each frame of pixels.

Claim <sup>7</sup>~~27~~ (Original): A system for storing and retrieving pixel data, comprising:

means for storing pixel data for a first frame of pixels in a first memory device and a second memory device, where each memory device includes a plurality of memory pages, and at least one memory page stores pixel data for at least two pixels from each of at least two horizontal rows of pixels in the first frame of pixels;

means for storing pixel data for a second frame of pixels in a third memory device and a fourth memory device, where each memory device includes a plurality of memory pages, and at least one memory page stores pixel data for at least two pixels from each of at least two horizontal rows of pixels in the second frame of pixels; and

means for retrieving pixel data for the first frame of pixels from the

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Amendment "A"

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first memory device and second memory device.

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